

WHAT IS CLAIMED IS:

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An image processing apparatus for processing image data supplied from an image sensor, comprising:

a memory having a first field for storing image data of one frame and a  
5 second field for storing position data of a defective pixel of the image sensor;

control means for controlling image data to write into said memory and image data to read from said memory;

a counter for counting the number of pixels of image data sequentially transferred from the image sensor; and

10 a defect correction circuit for correcting the image data of each pixel sequentially transferred from the image sensor in accordance with image data of pixels adjacent to a pixel whose image data is currently transferred,

wherein said control means writes the image data corrected by said defect correction circuit in the first field of said memory at a storage location

15 corresponding to the defect pixel, if a count of said counter becomes coincident with a number corresponding to the position data of the defective pixel in the second field of said memory, and writes the image data supplied directly from the image sensor in the first field, if the count is not coincident with the number corresponding to the position data of the defective pixel.

20 2. An image processing apparatus according to claim 1, wherein a storage location in said memory is identified by a row address and a column address, the first field stores the image data of each line at a corresponding row address, and the second field stores the position data of the defective pixel at the same row address.

25 3. An image processing apparatus according to claim 1 or 2, wherein the

second field of said memory stores information representative of a single defective pixel or the number of consecutive defective pixels and information representative of a position of the defective pixel in each line.

5 4. An image processing apparatus according to claim 1, wherein said defect correction circuit calculates an average of image data of pixels adjacent to a subject pixel.

10 5. An image processing apparatus according to claim 1, further comprising an external memory, which store position data of defective pixel of the image sensor.

6. An image processing apparatus according to claim 1, wherein said memory is a dynamic random access memory.

15 7. An image pickup apparatus including a display device for displaying an image signal processed by the image processing apparatus according to claim 1.

8. An image pickup apparatus according to claim 7, wherein the display device is a liquid crystal display.

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9. An image processing apparatus according to claim 1, further comprising a delay circuit for delaying the image data from the image sensor by a time required for a defect correction process, if the count of said counter is not coincident with the value corresponding to the position data of the defective pixel.

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10. An image processing method of processing image data supplied from

an image sensor, comprising the steps of:

(a) reading defective pixel position data of one line of the image sensor from a memory;

(b) sequentially fetching the image data from the image sensor;

5 (c) counting the number of pixels of the image data fetched from the image sensor;

(d) correcting the image data sequentially transferred from the image sensor in accordance with image data of pixels adjacent to a pixel whose image data is currently transferred; and

10 (e) writing the corrected image data in the memory at a storage location corresponding to the defective pixel, if a count becomes coincident with a number corresponding to the position data of the defective pixel, and writing the image data not corrected and supplied directly from the image sensor in the memory, if the count is not coincident with the number corresponding to the position data of the defective pixel.  
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11. An image processing method according to claim 10, wherein a storage address in the memory is identified by a row address and a column address, the memory stores the position data of the defective pixel in each line at a row address  
20 corresponding to the line, and said step (e) writes the image data not corrected or the correction image data in each line in the memory at a row address corresponding to the line and at a corresponding column address.

12. An image processing method according to claim 10, wherein said step  
25 (d) calculates an average of image data of pixels adjacent to a subject pixel.

13. An image processing method according to claim 10, wherein said step (d) calculates an average of image data of pixels adjacent to a subject pixel in a row direction.

5 14. An image processing method according to claim 10, wherein said step (d) calculates an average of image data of pixels adjacent to a subject pixel in a column direction.

15. An image processing method according to claim 10, wherein said step  
10 (d) performs a weighing process in accordance with distances between pixels adjacent to a subject pixel and the subject pixel.

16. An image processing method according to claim 12, wherein the  
15 calculation process is a process of dividing a sum of pixel data of two pixels adjacent to a subject pixel and cutting a lowest one bit.